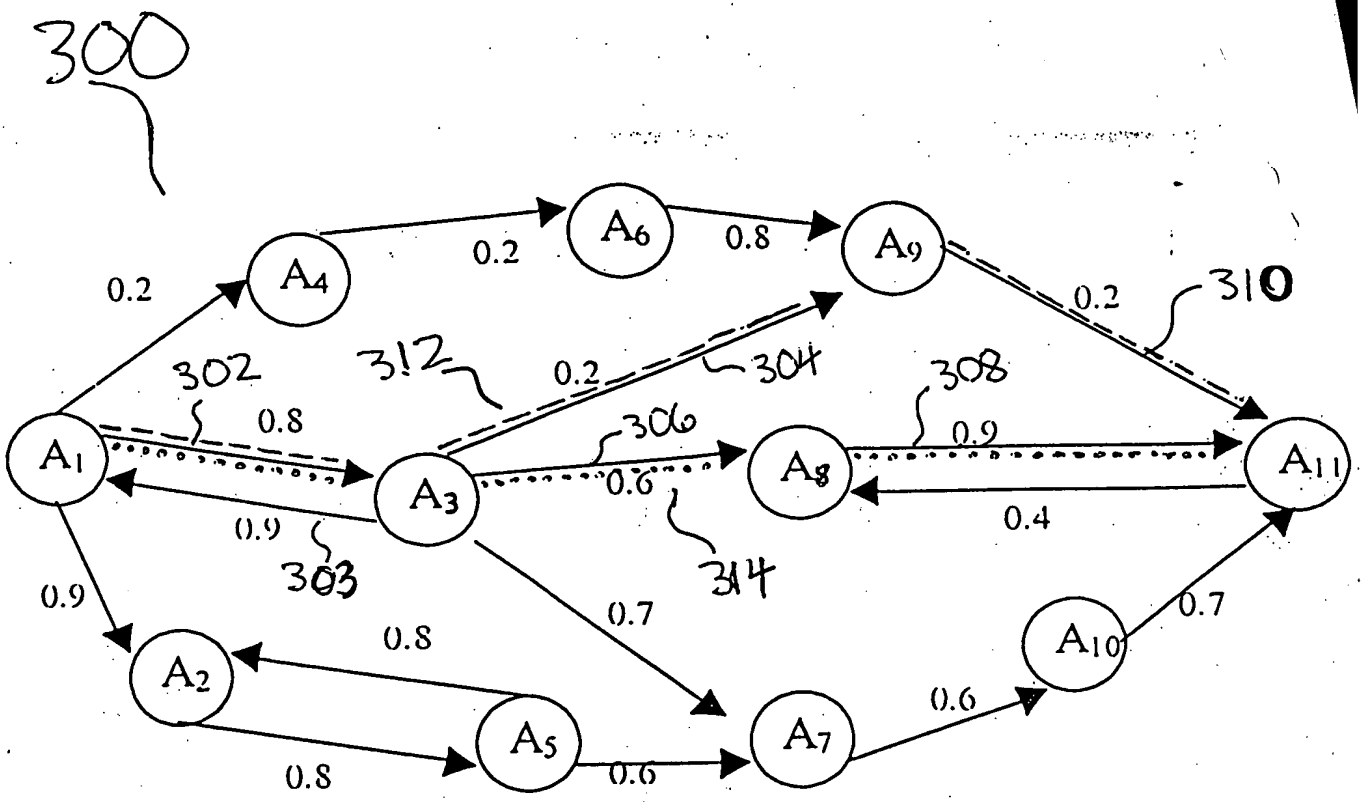
300
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
0.2
0.8
0.2
0.8
0.2
0.2
0.8
0.9
0.4
0.9
0.6
0.7
0.8
0.8
0.6
0.6
0.7
302
303
304
306
308
310
312
314

Fig. 1

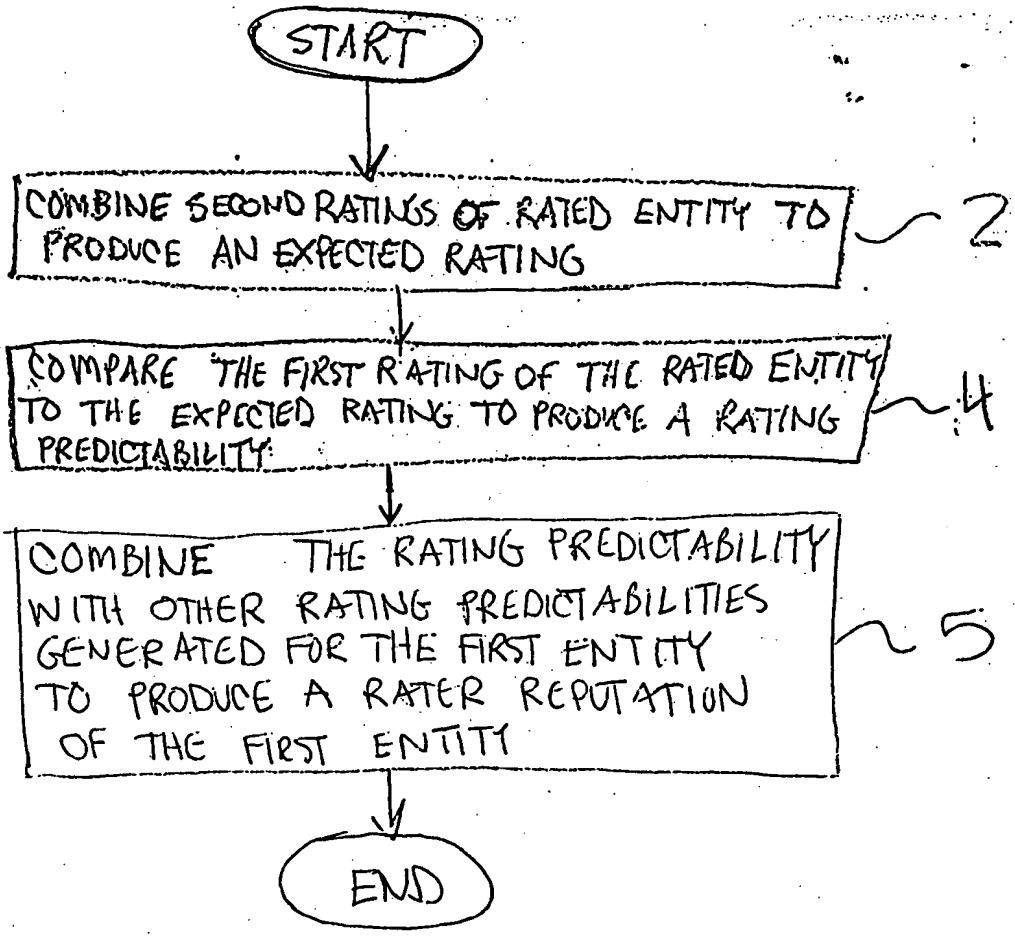
START
COMBINE SECOND RATINGS OF RATED ENTITY TO PRODUCE AN EXPECTED RATING
2
COMPARE THE FIRST RATING OF THE RATED ENTITY TO THE EXPECTED RATING TO PRODUCE A RATING PREDICTABILITY
4
COMBINE THE RATING PREDICTABILITY WITH OTHER RATING PREDICTABILITIES GENERATED FOR THE FIRST ENTITY TO PRODUCE A RATER REPUTATION OF THE FIRST ENTITY
5
END

Fig. 2

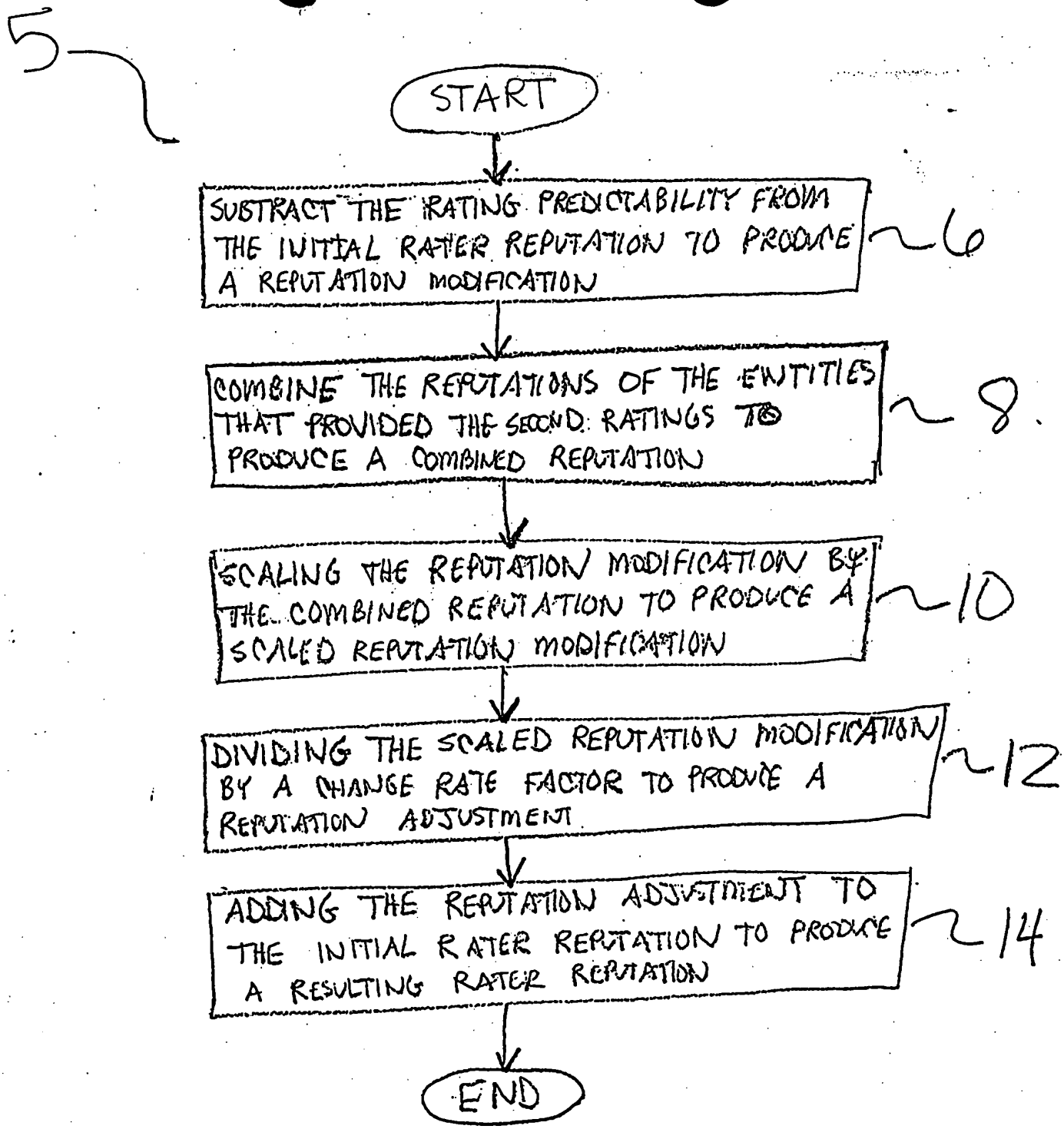
5
START
SUBTRACT THE RATING PREDICTABILITY FROM THE INITIAL RATER REPUTATION TO PRODUCE A REPUTATION MODIFICATION
6
COMBINE THE REPUTATIONS OF THE ENTITIES THAT PROVIDED THE SECOND RATINGS TO PRODUCE A COMBINED REPUTATION
8
SCALING THE REPUTATION MODIFICATION BY THE COMBINED REPUTATION TO PRODUCE A SCALED REPUTATION MODIFICATION
10
DIVIDING THE SCALED REPUTATION MODIFICATION BY A CHANGE RATE FACTOR TO PRODUCE A REPUTATION ADJUSTMENT
12
ADDING THE REPUTATION ADJUSTMENT TO THE INITIAL RATER REPUTATION TO PRODUCE A RESULTING RATER REPUTATION
14
END

FIG. 3

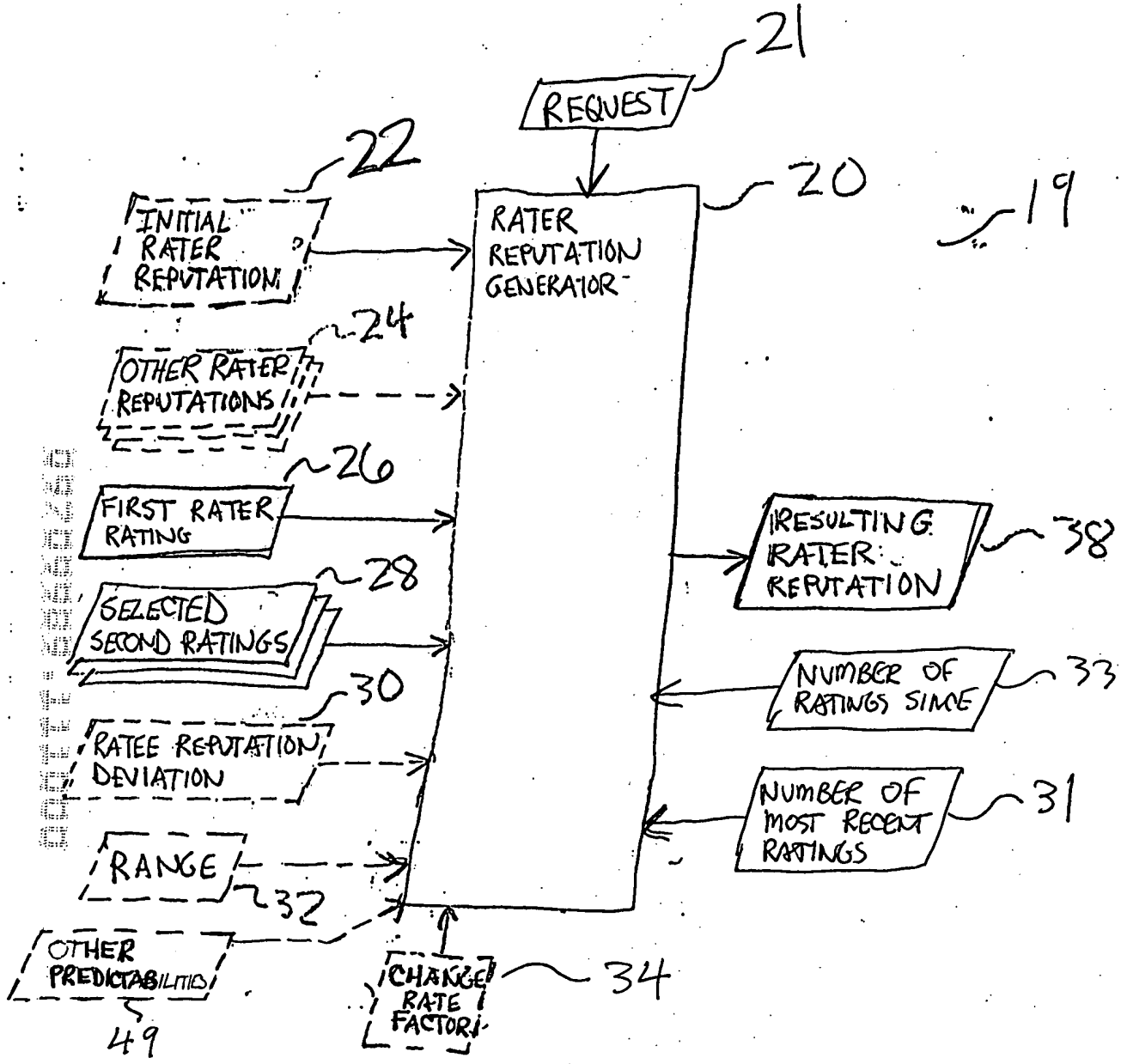
21
REQUEST
22
INITIAL RATER REPUTATION
20
RATER REPUTATION GENERATOR
19
24
OTHER RATER REPUTATIONS
26
FIRST RATER RATING
28
SELECTED SECOND RATINGS
30
RATEE REPUTATION DEVIATION
RANGE
32
OTHER PREDICTABILITIES
49
CHANGE RATE FACTOR
34
RESULTING RATER REPUTATION
38
NUMBER OF RATINGS SINCE
33
NUMBER OF MOST RECENT RATINGS
31

FIG. 4

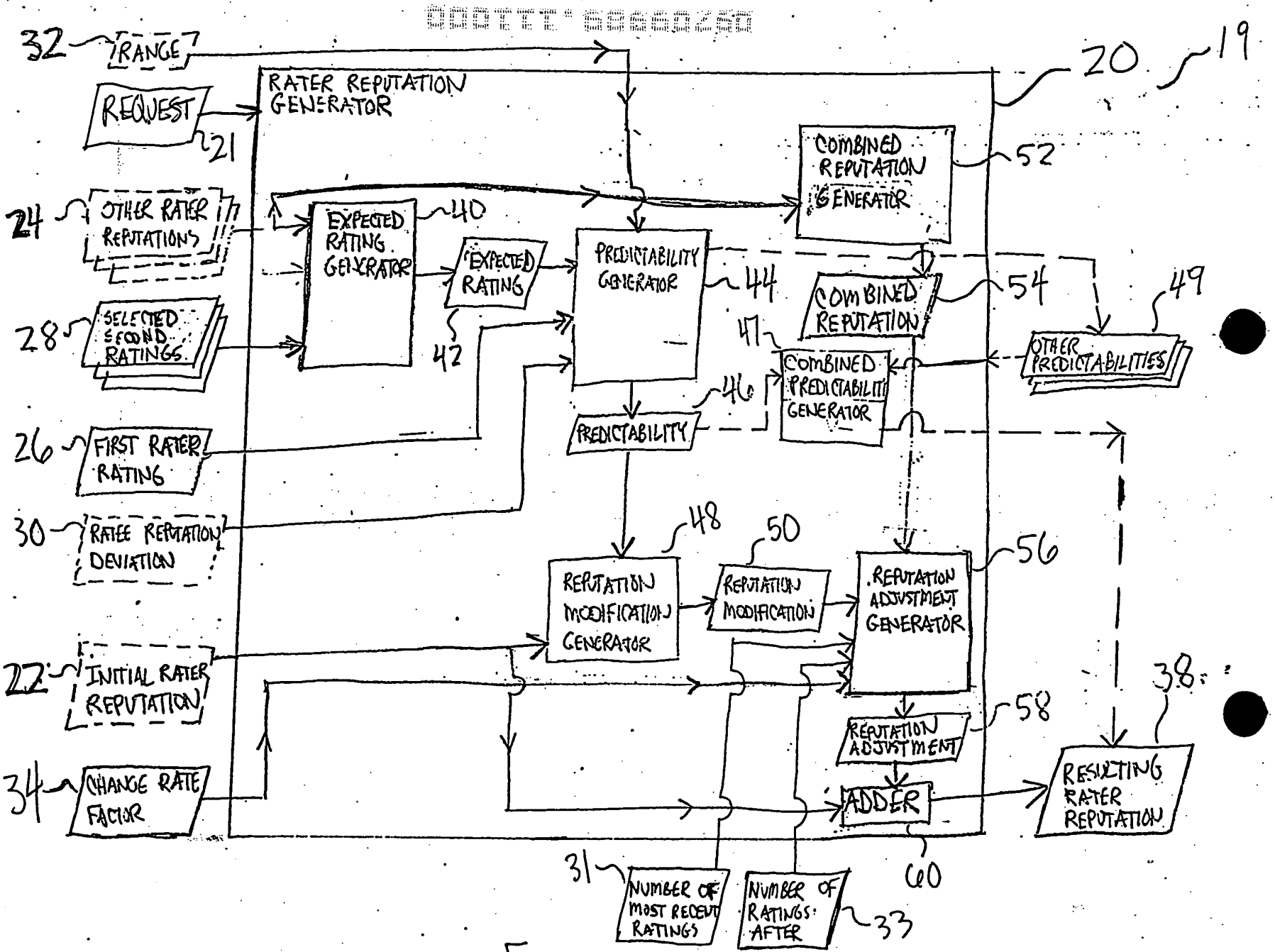
32
RANGE
REQUEST
21
RATER REPUTATION GENERATOR
20
19
COMBINED REPUTATION GENERATOR
52
24
OTHER RATER REPUTATIONS
EXPECTED RATING GENERATOR
40
EXPECTED RATING
42
PREDICTABILITY GENERATOR
44
COMBINED REPUTATION
54
49
28
SELECTED SECOND RATINGS
47
COMBINED PREDICTABILITY GENERATOR
OTHER PREDICTABILITIES
26
FIRST RATER RATING
PREDICTABILITY
46
30
RATEE REPUTATION DEVIATION
48
50
56
REPUTATION MODIFICATION GENERATOR
REPUTATION MODIFICATION
REPUTATION ADJUSTMENT GENERATOR
22
INITIAL RATER REPUTATION
38
58
REPUTATION ADJUSTMENT
34
CHANGE RATE FACTOR
ADDER
RESULTING RATER REPUTATION
60
31
NUMBER OF MOST RECENT RATINGS
NUMBER OF RATINGS AFTER
33

Fig. 5

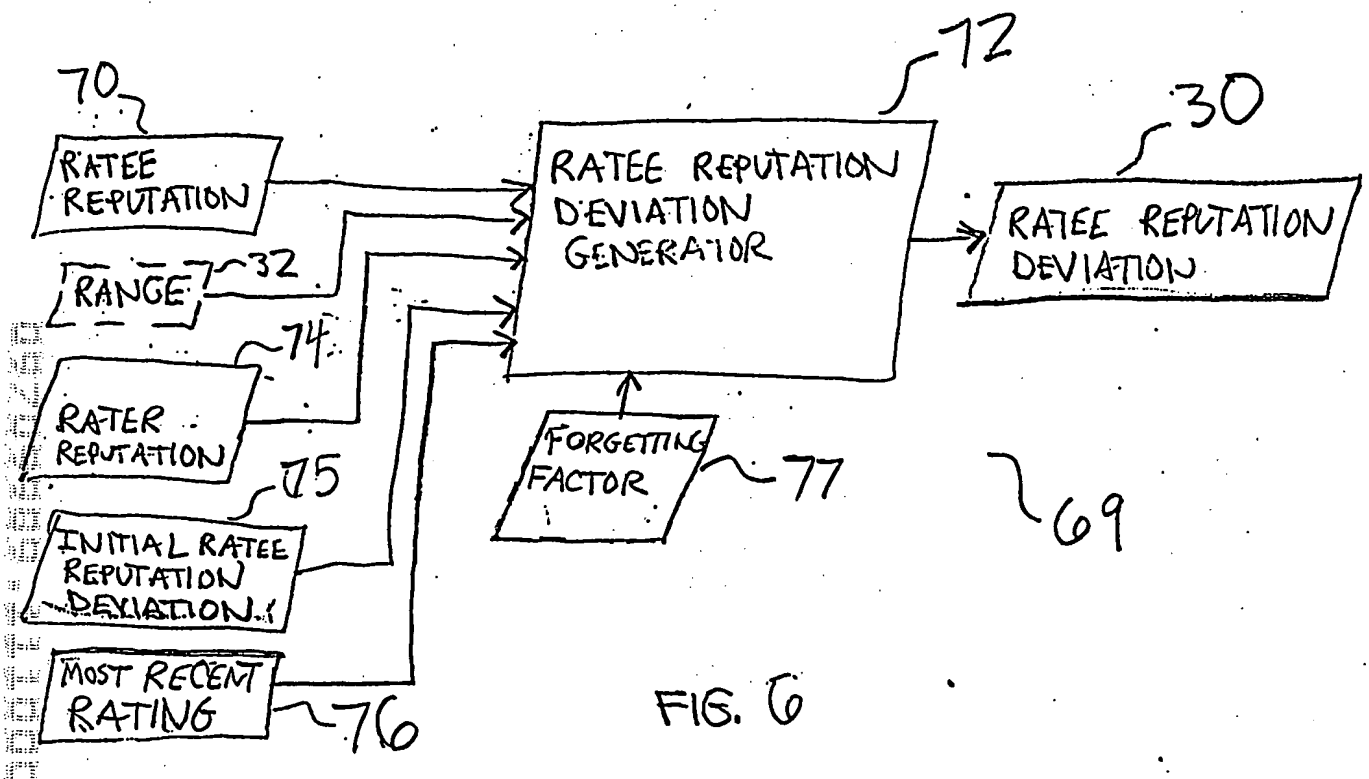
70
RATEE REPUTATION
RANGE
32
74
RATER REPUTATION
75
INITIAL RATEE REPUTATION DEVIATION
MOST RECENT RATING
76
72
RATEE REPUTATION DEVIATION GENERATOR
FORGETTING FACTOR
77
30
RATEE REPUTATION DEVIATION
69

FIG. 6

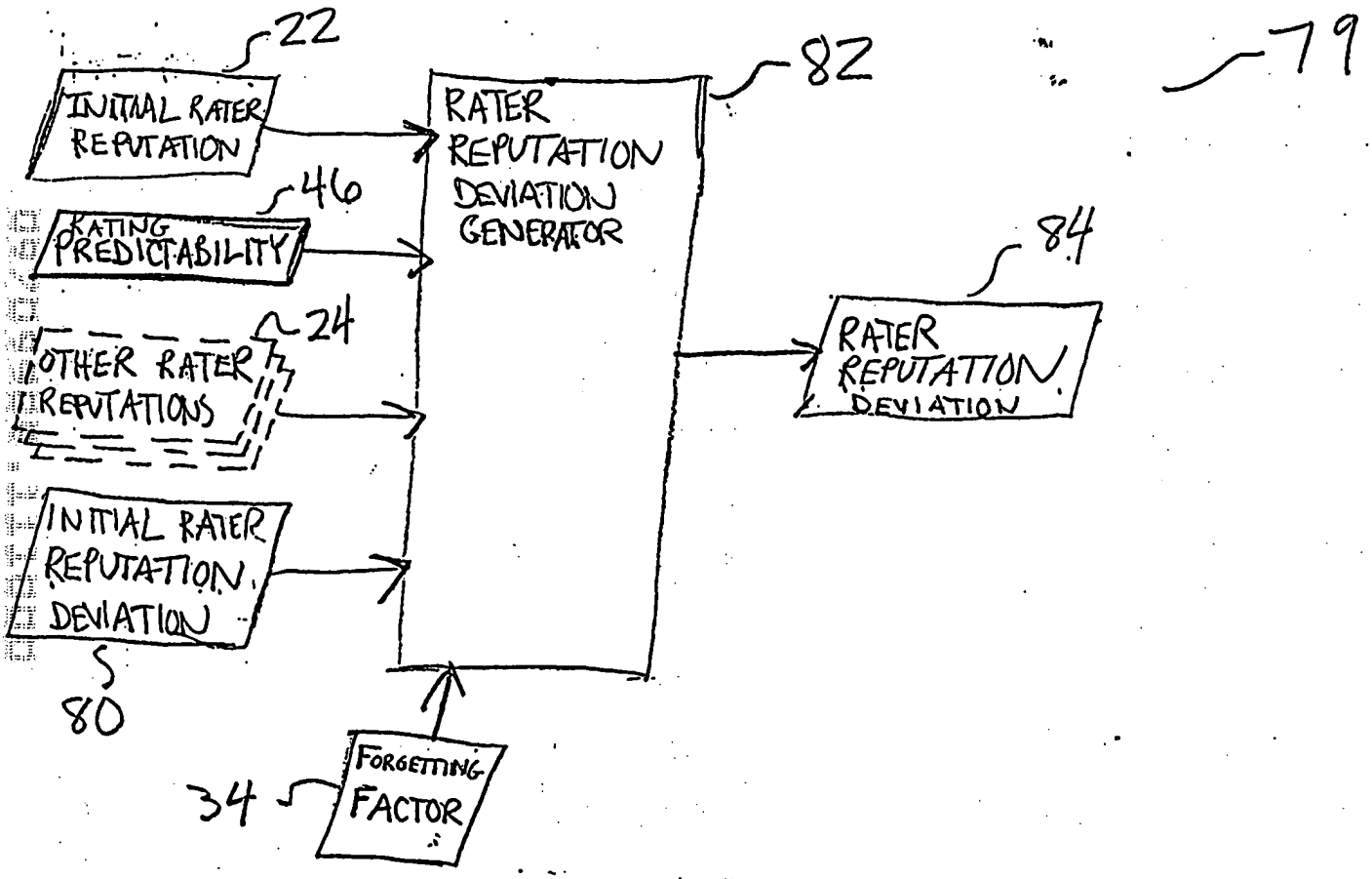
22
INITIAL RATER REPUTATION
46
RATING PREDICTABILITY
24
OTHER RATER REPUTATIONS
INITIAL RATER REPUTATION DEVIATION
80
RATER REPUTATION DEVIATION GENERATOR
82
79
84
RATER REPUTATION DEVIATION
34
FORGETTING FACTOR

FIG. 7

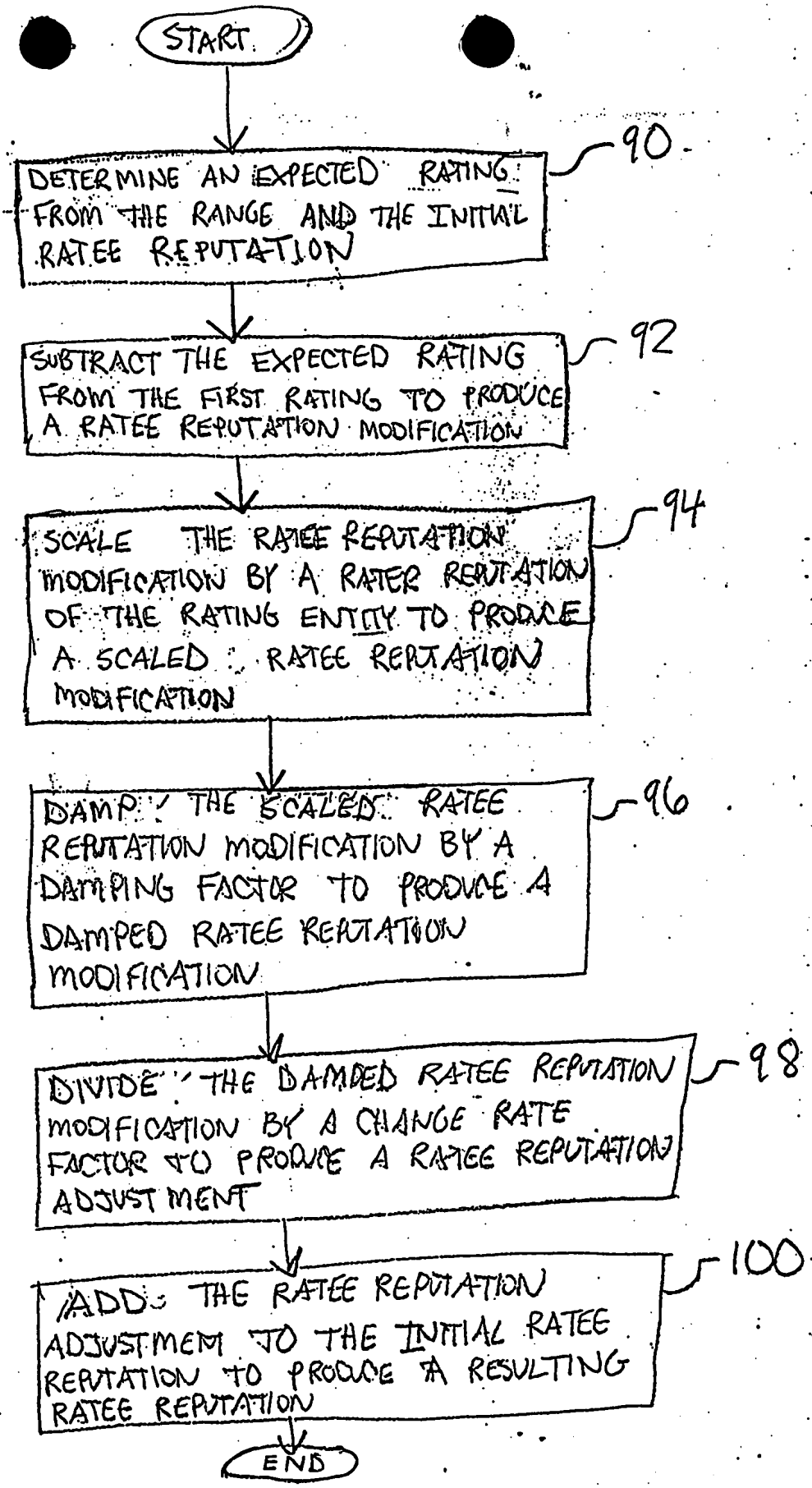
START
DETERMINE AN EXPECTED RATING FROM THE RANGE AND THE INITIAL RATEE REPUTATION
90
SUBTRACT THE EXPECTED RATING FROM THE FIRST RATING TO PRODUCE A RATEE REPUTATION MODIFICATION
92
SCALE THE RATEE REPUTATION MODIFICATION BY A RATER REPUTATION OF THE RATING ENTITY TO PRODUCE A SCALED RATEE REPUTATION MODIFICATION
94
DAMP THE SCALED RATEE REPUTATION MODIFICATION BY A DAMPING FACTOR TO PRODUCE A DAMPED RATEE REPUTATION MODIFICATION
96
DIVIDE THE DAMPED RATEE REPUTATION MODIFICATION BY A CHANGE RATE FACTOR TO PRODUCE A RATEE REPUTATION ADJUSTMENT
98
ADD THE RATEE REPUTATION ADJUSTMENT TO THE INITIAL RATEE REPUTATION TO PRODUCE A RESULTING RATEE REPUTATION
100
END

FIG. 8

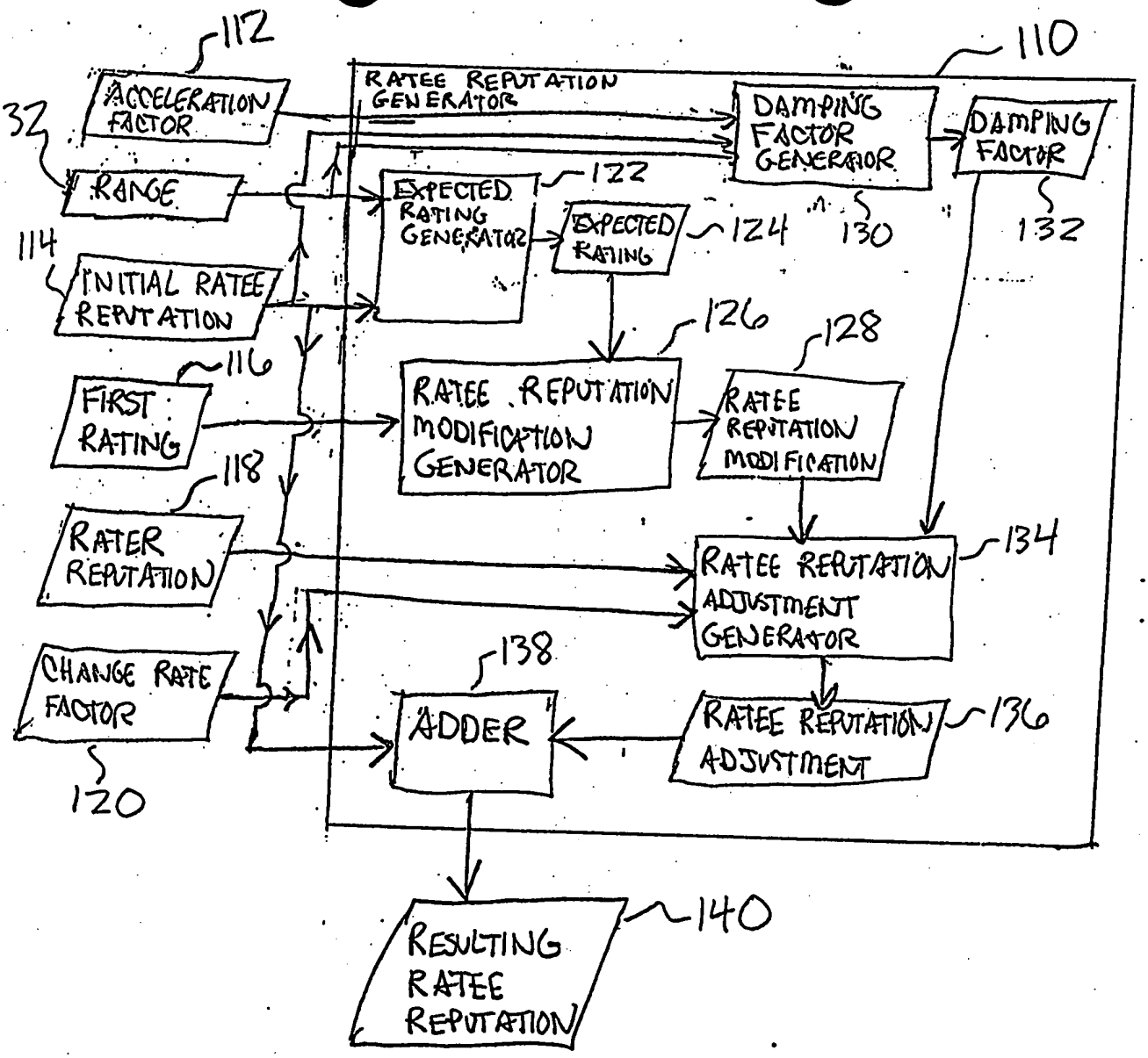
109
112
ACCELERATION FACTOR
32
RANGE
114
INITIAL RATEE REPUTATION
116
FIRST RATING
118
RATER REPUTATION
CHANGE RATE FACTOR
120
RATEE REPUTATION GENERATOR
110
DAMPING FACTOR GENERATOR
DAMPING FACTOR
132
130
EXPECTED RATING GENERATOR
122
EXPECTED RATING
124
RATEE REPUTATION MODIFICATION GENERATOR
126
RATEE REPUTATION MODIFICATION
128
RATEE REPUTATION ADJUSTMENT GENERATOR
134
ADDER
138
RATEE REPUTATION ADJUSTMENT
136
RESULTING RATEE REPUTATION
140

FIG. 9

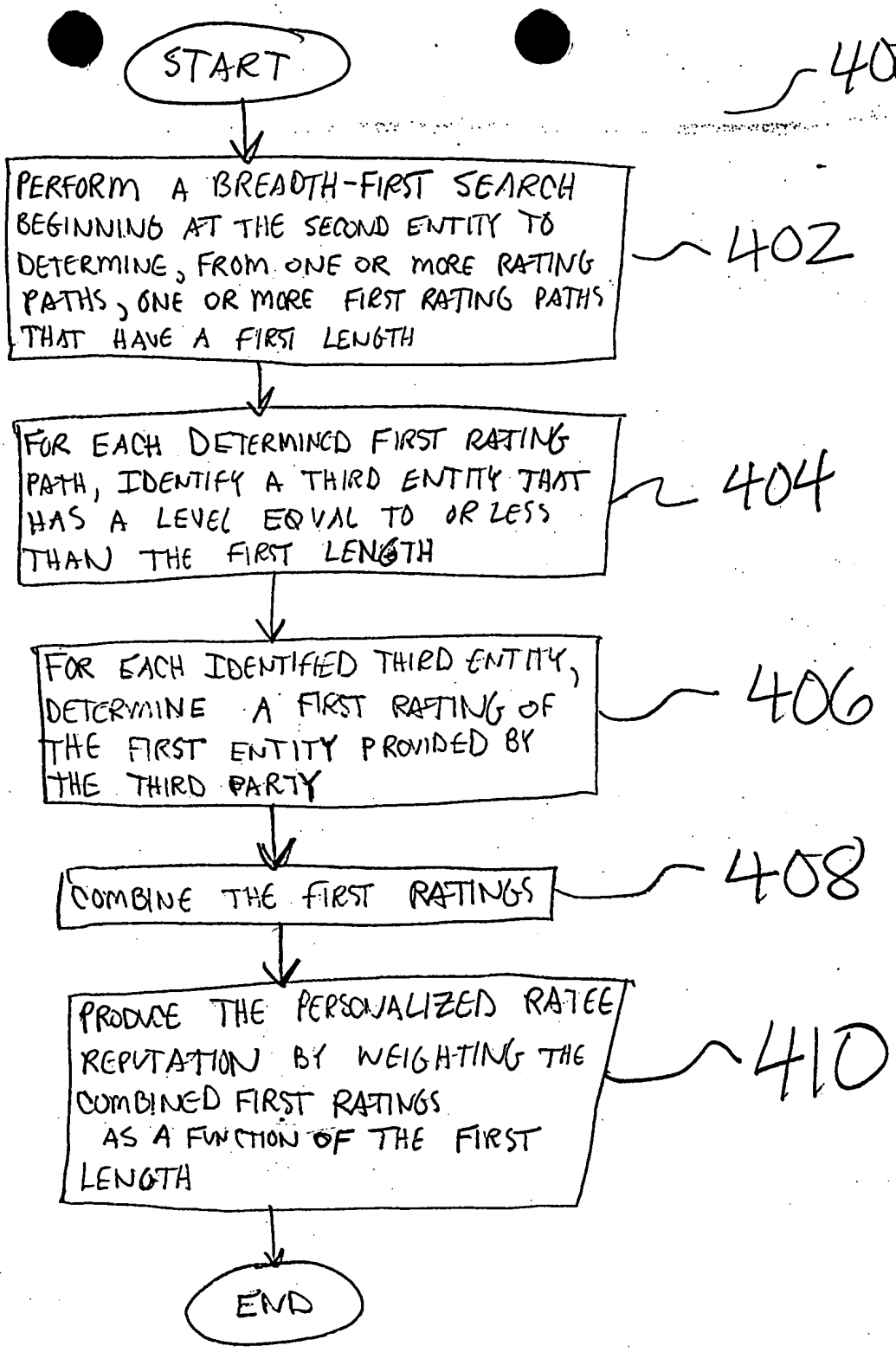
START
400
PERFORM A BREADTH-FIRST SEARCH BEGINNING AT THE SECOND ENTITY TO DETERMINE, FROM ONE OR MORE RATING PATHS, ONE OR MORE FIRST RATING PATHS THAT HAVE A FIRST LENGTH
402
FOR EACH DETERMINED FIRST RATING PATH, IDENTIFY A THIRD ENTITY THAT HAS A LEVEL EQUAL TO OR LESS THAN THE FIRST LENGTH
404
FOR EACH IDENTIFIED THIRD ENTITY, DETERMINE A FIRST RATING OF THE FIRST ENTITY PROVIDED BY THE THIRD PARTY
406
COMBINE THE FIRST RATINGS
408
PRODUCE THE PERSONALIZED RATEE REPUTATION BY WEIGHTING THE COMBINED FIRST RATINGS AS A FUNCTION OF THE FIRST LENGTH
410
END

Fig. 10

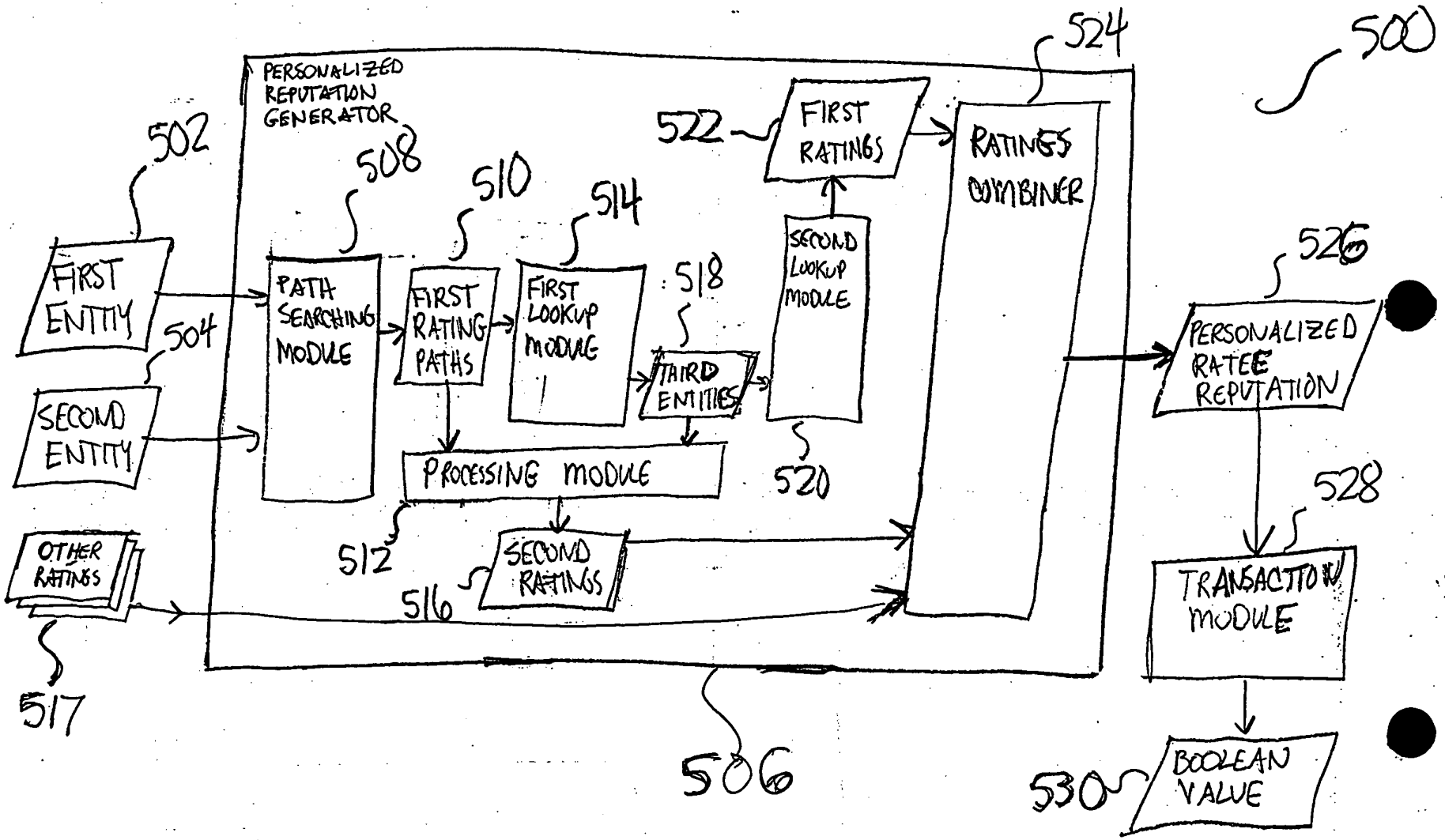
PERSONALIZED REPUTATION GENERATOR
500
502
FIRST ENTITY
504
SECOND ENTITY
OTHER RATINGS
517
508
PATH SEARCHING MODULE
510
FIRST RATING PATHS
514
FIRST LOOKUP MODULE
518
THIRD ENTITIES
SECOND LOOKUP MODULE
520
PROCESSING MODULE
512
SECOND RATINGS
516
522
FIRST RATINGS
524
RATINGS COMBINER
526
PERSONALIZED RATEE REPUTATION
528
TRANSACTION MODULE
530
BOOLEAN VALUE
506

Fig. 11

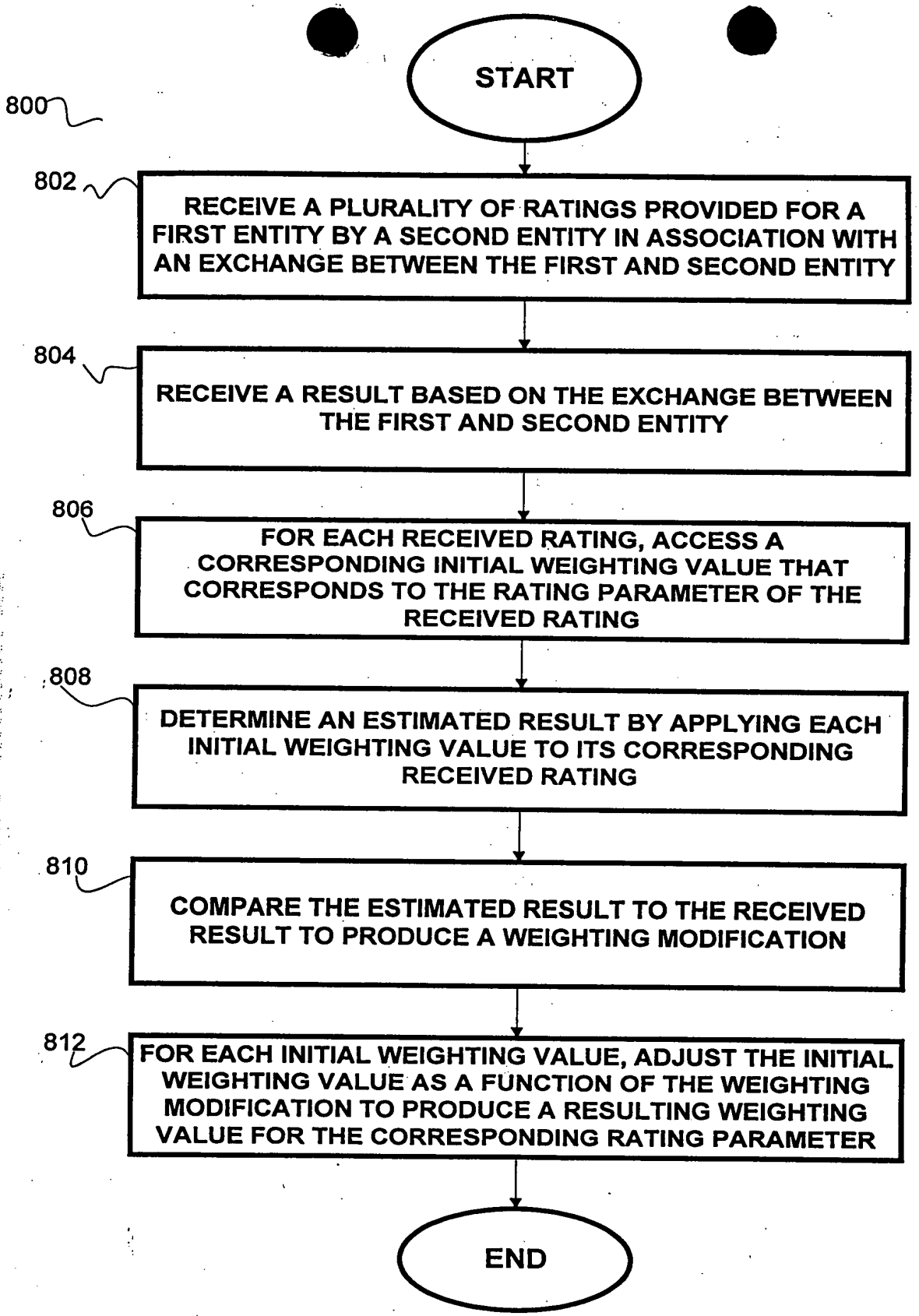
800
START
802
RECEIVE A PLURALITY OF RATINGS PROVIDED FOR A FIRST ENTITY BY A SECOND ENTITY IN ASSOCIATION WITH AN EXCHANGE BETWEEN THE FIRST AND SECOND ENTITY
804
RECEIVE A RESULT BASED ON THE EXCHANGE BETWEEN THE FIRST AND SECOND ENTITY
806
FOR EACH RECEIVED RATING, ACCESS A CORRESPONDING INITIAL WEIGHTING VALUE THAT CORRESPONDS TO THE RATING PARAMETER OF THE RECEIVED RATING
808
DETERMINE AN ESTIMATED RESULT BY APPLYING EACH INITIAL WEIGHTING VALUE TO ITS CORRESPONDING RECEIVED RATING
810
COMPARE THE ESTIMATED RESULT TO THE RECEIVED RESULT TO PRODUCE A WEIGHTING MODIFICATION
812
FOR EACH INITIAL WEIGHTING VALUE, ADJUST THE INITIAL WEIGHTING VALUE AS A FUNCTION OF THE WEIGHTING MODIFICATION TO PRODUCE A RESULTING WEIGHTING VALUE FOR THE CORRESPONDING RATING PARAMETER
END

FIG. 12

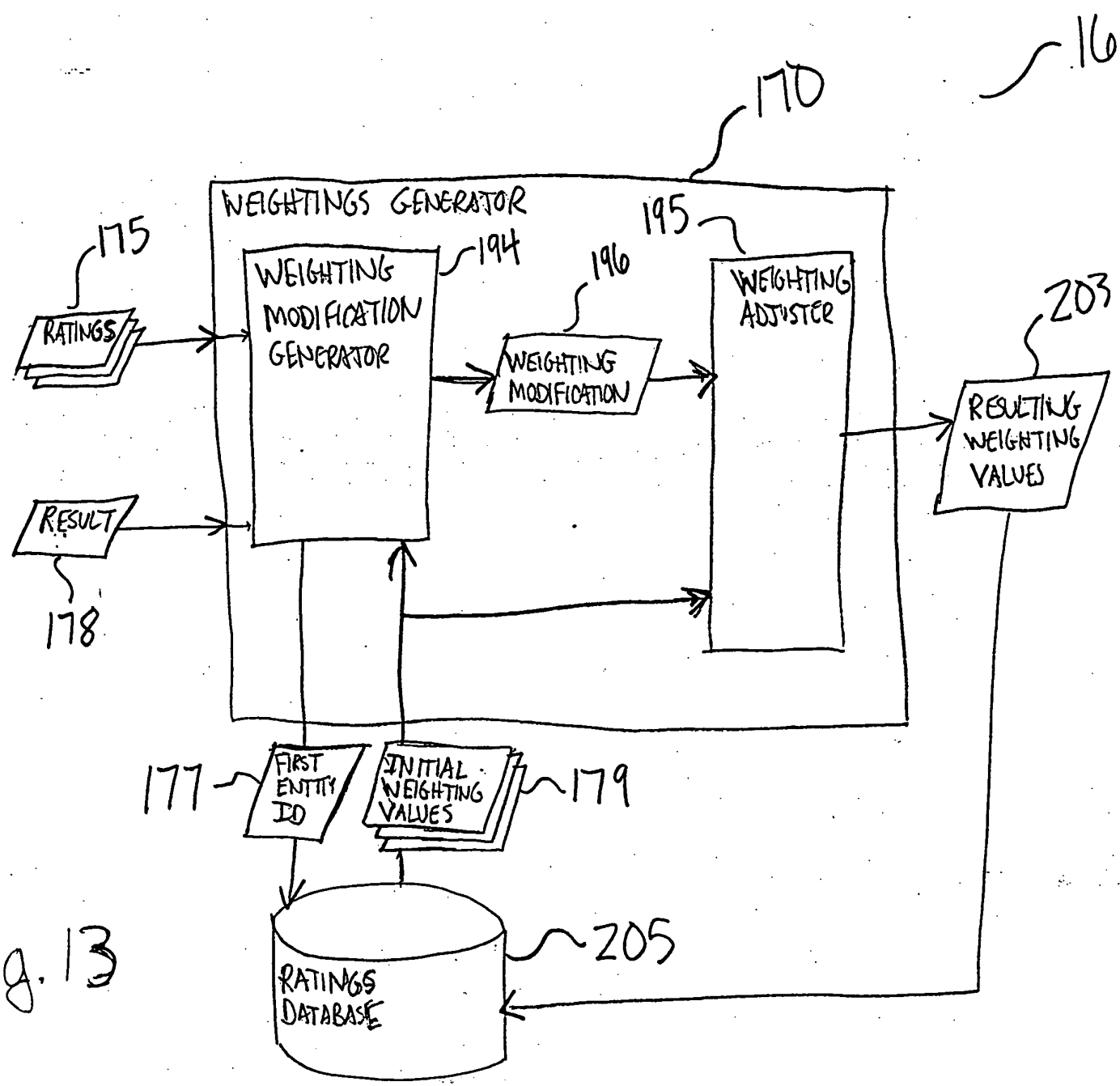
169
170
WEIGHTINGS GENERATOR
195
175
194
196
203
RATINGS
WEIGHTING MODIFICATION GENERATOR
WEIGHTING MODIFICATION
WEIGHTING ADJUSTER
RESULTING WEIGHTING VALUES
RESULT
178
177
FIRST ENTITY ID
INITIAL WEIGHTING VALUES
179
205
RATINGS DATABASE

Fig. 13

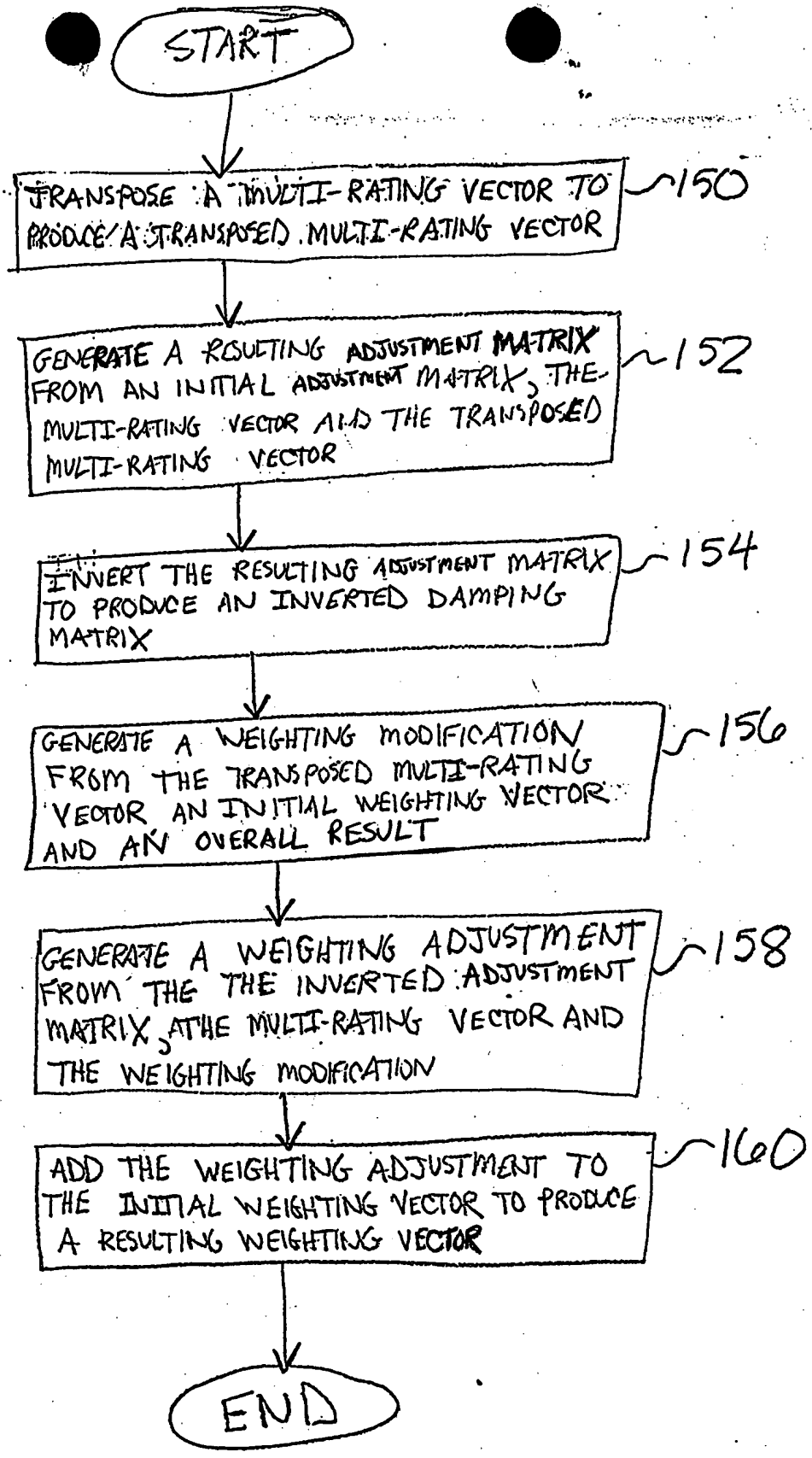
START
TRANSPOSE A MULTI-RATING VECTOR TO PRODUCE A TRANSPOSED MULTI-RATING VECTOR
150
GENERATE A RESULTING ADJUSTMENT MATRIX FROM AN INITIAL ADJUSTMENT MATRIX, THE MULTI-RATING VECTOR AND THE TRANSPOSED MULTI-RATING VECTOR
152
INVERT THE RESULTING ADJUSTMENT MATRIX TO PRODUCE AN INVERTED DAMPING MATRIX
154
GENERATE A WEIGHTING MODIFICATION FROM THE TRANSPOSED MULTI-RATING VECTOR AN INITIAL WEIGHTING VECTOR AND AN OVERALL RESULT
156
GENERATE A WEIGHTING ADJUSTMENT FROM THE THE INVERTED ADJUSTMENT MATRIX, THE MULTI-RATING VECTOR AND THE WEIGHTING MODIFICATION
158
ADD THE WEIGHTING ADJUSTMENT TO THE INITIAL WEIGHTING VECTOR TO PRODUCE A RESULTING WEIGHTING VECTOR
160
END

FIG. 14

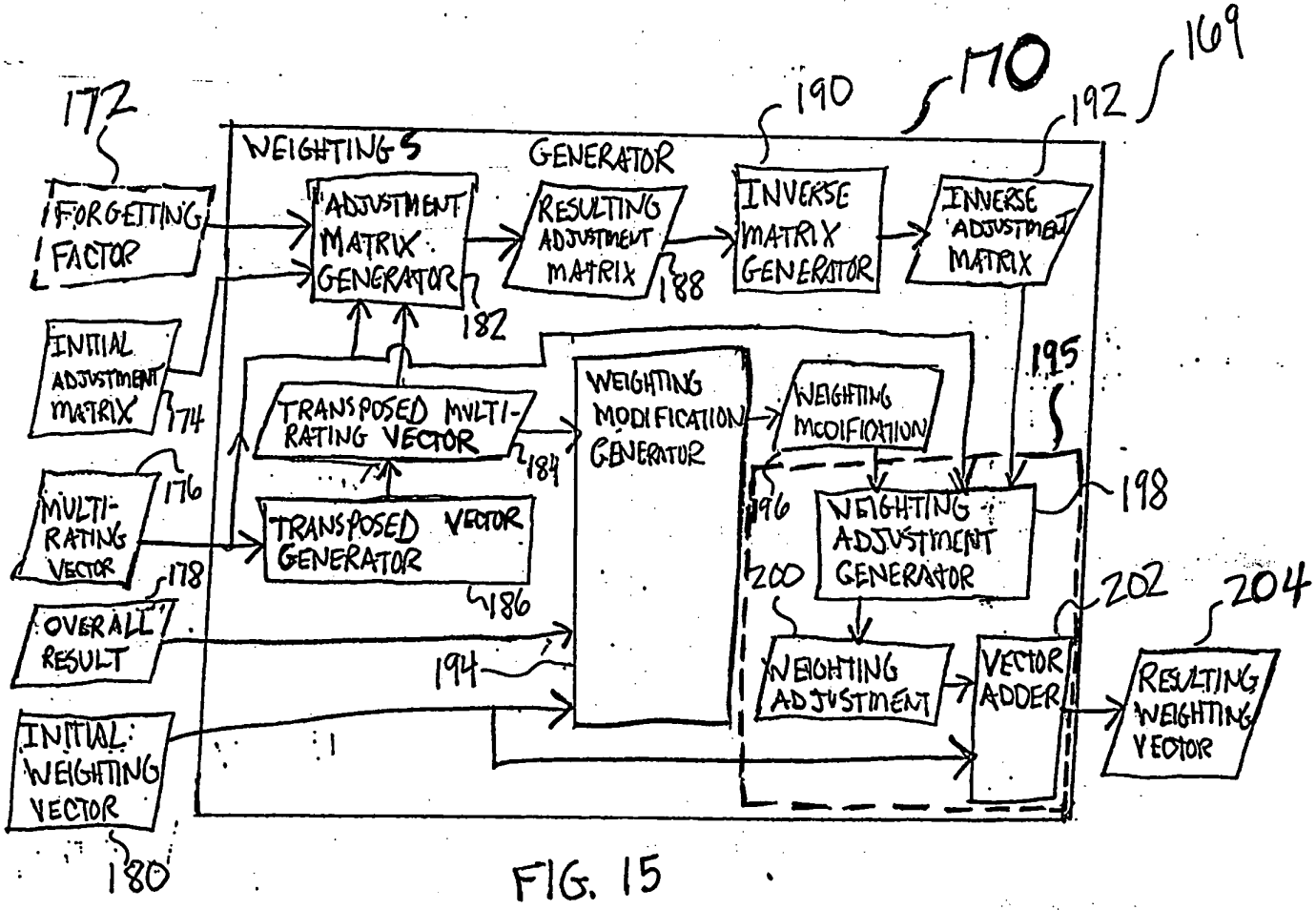
172
FORGETTING FACTOR
WEIGHTING GENERATOR
170
169
190
192
ADJUSTMENT MATRIX GENERATOR
182
RESULTING ADJUSTMENT MATRIX
188
INVERSE MATRIX GENERATOR
INVERSE ADJUSTMENT MATRIX
INITIAL ADJUSTMENT MATRIX
174
TRANSPOSED MULTI-RATING VECTOR
184
WEIGHTING MODIFICATION GENERATOR
WEIGHTING MODIFICATION
195
MULTI-RATING VECTOR
176
TRANSPOSED VECTOR GENERATOR
186
196
WEIGHTING ADJUSTMENT GENERATOR
198
178
OVERALL RESULT
200
202
204
194
WEIGHTING ADJUSTMENT
VECTOR ADDER
RESULTING WEIGHTING VECTOR
INITIAL WEIGHTING VECTOR
180

FIG. 15

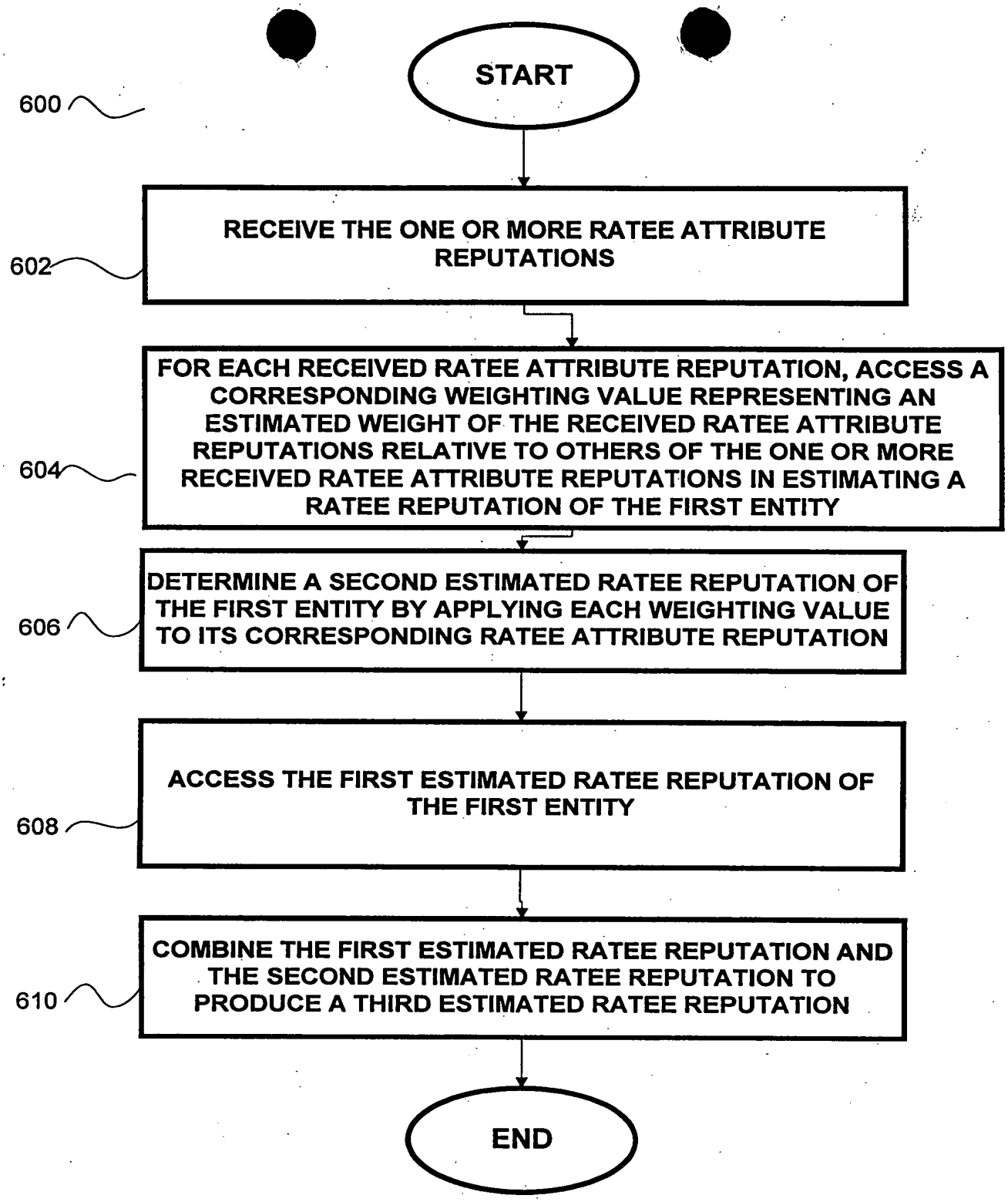
START
600
RECEIVE THE ONE OR MORE RATEE ATTRIBUTE REPUTATIONS
602
FOR EACH RECEIVED RATEE ATTRIBUTE REPUTATION, ACCESS A CORRESPONDING WEIGHTING VALUE REPRESENTING AN ESTIMATED WEIGHT OF THE RECEIVED RATEE ATTRIBUTE REPUTATIONS RELATIVE TO OTHERS OF THE ONE OR MORE RECEIVED RATEE ATTRIBUTE REPUTATIONS IN ESTIMATING A RATEE REPUTATION OF THE FIRST ENTITY
604
DETERMINE A SECOND ESTIMATED RATEE REPUTATION OF THE FIRST ENTITY BY APPLYING EACH WEIGHTING VALUE TO ITS CORRESPONDING RATEE ATTRIBUTE REPUTATION
606
ACCESS THE FIRST ESTIMATED RATEE REPUTATION OF THE FIRST ENTITY
608
COMBINE THE FIRST ESTIMATED RATEE REPUTATION AND THE SECOND ESTIMATED RATEE REPUTATION TO PRODUCE A THIRD ESTIMATED RATEE REPUTATION
610
END

FIG. 16

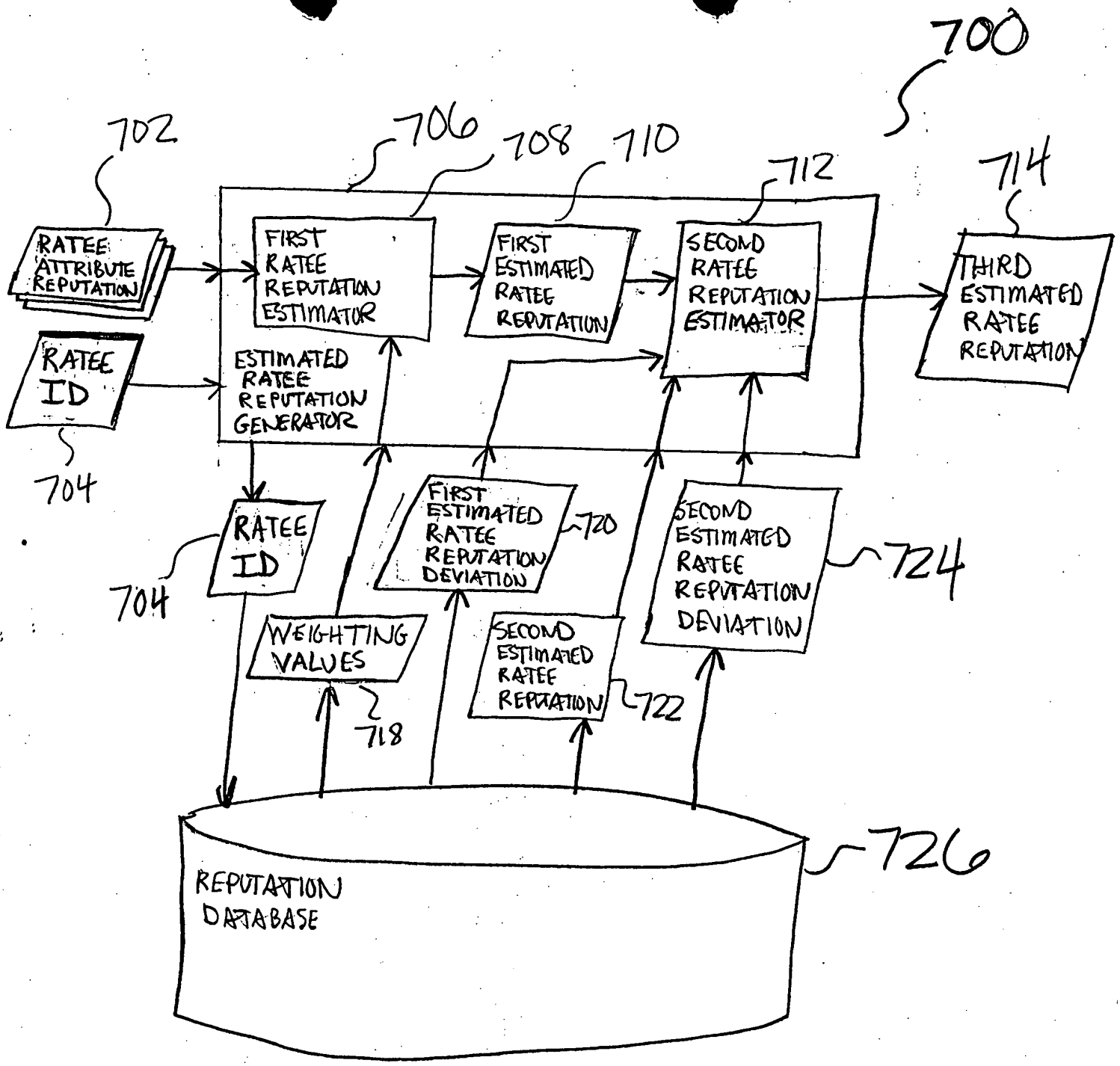
700
702
706
708
710
712
714
RATEE ATTRIBUTE REPUTATION
FIRST RATEE REPUTATION ESTIMATOR
FIRST ESTIMATED RATEE REPUTATION
SECOND RATEE REPUTATION ESTIMATOR
THIRD ESTIMATED RATEE REPUTATION
RATEE ID
ESTIMATED RATEE REPUTATION GENERATOR
704
RATEE ID
704
FIRST ESTIMATED RATEE REPUTATION DEVIATION
720
SECOND ESTIMATED RATEE REPUTATION DEVIATION
724
WEIGHTING VALUES
718
SECOND ESTIMATED RATEE REPUTATION
722
REPUTATION DATABASE
726

Fig. 17

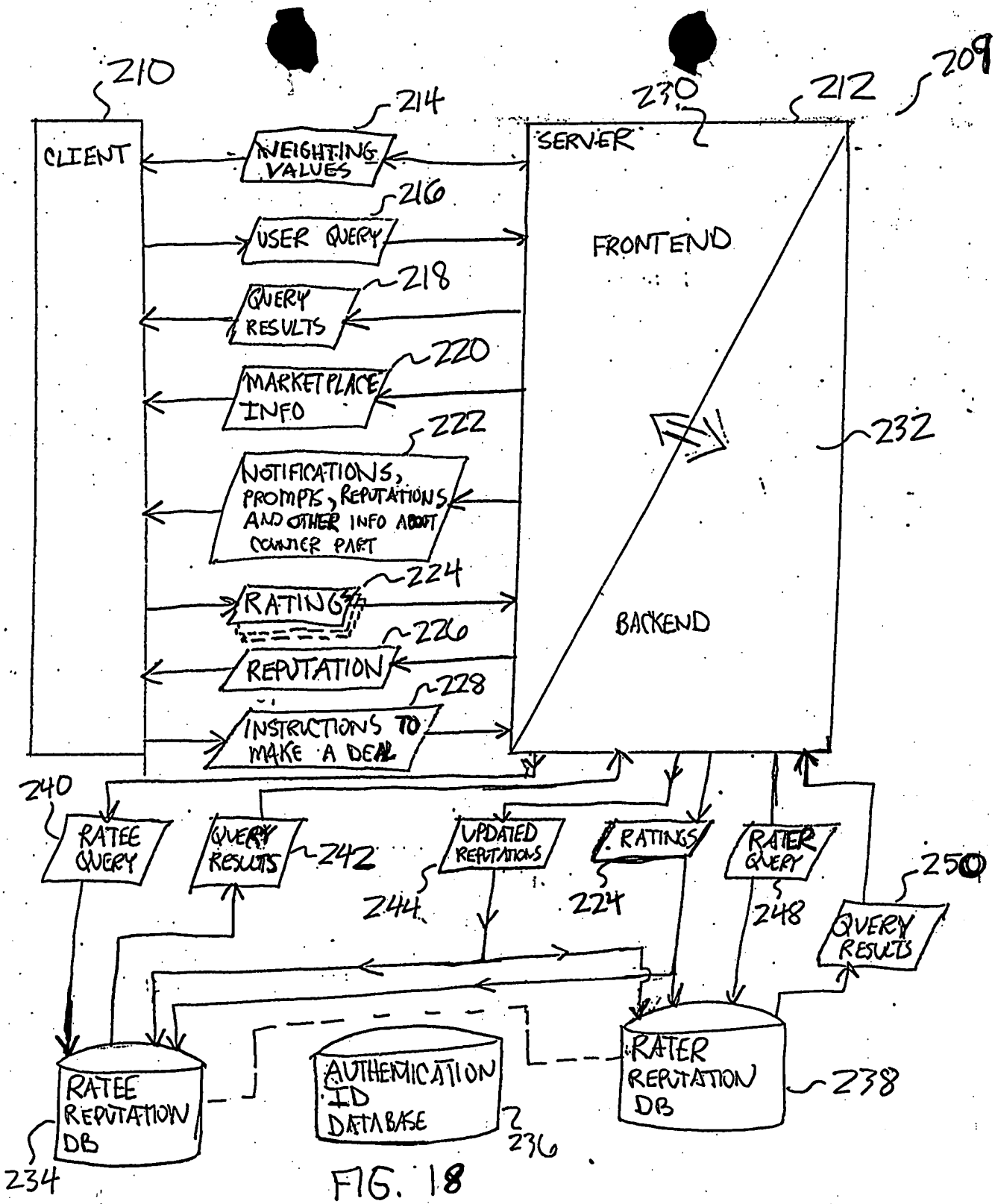
210
214
230
212
209
CLIENT
WEIGHTING VALUES
SERVER
216
USER QUERY
FRONTEND
218
QUERY RESULTS
220
MARKETPLACE INFO
222
NOTIFICATIONS, PROMPTS, REPUTATIONS AND OTHER INFO ABOUT COUNTER PART
232
224
RATING
BACKEND
226
REPUTATION
228
INSTRUCTIONS TO MAKE A DEAL
240
RATEE QUERY
QUERY RESULTS
242
UPDATED REPUTATIONS
244
RATINGS
224
RATER QUERY
248
250
QUERY RESULTS
RATEE REPUTATION DB
234
AUTHEMICATION ID DATABASE
236
RATER REPUTATION DB
238

FIG. 18